

Public Alligator Hunting Season Report 2010



Submitted by:
Jay Butfiloski
Furbearer & Alligator
Program Coordinator

South Carolina Department of Natural Resources
Wildlife & Freshwater Fisheries Division



DNR

Alligator Project
PO Box 167
Columbia, SC 29202
www.dnr.sc.gov

F&AP Report 10-05

Revised 5-16-2011

INTRODUCTION

The successful return of the American alligator (*Alligator mississippiensis*) since its near demise and subsequent listing as “endangered” by the Endangered Species Act in the 1960’s has prompted most Southeastern states to implement hunting seasons to allow the public use of this unique natural resource. The hunts are also seen as an attempt to maintain the number of nuisance alligator complaints at a manageable level. The alligator is currently listed as “threatened,” not because of population numbers, which are decidedly secure, but because of its “similarity of appearance” to other rare and protected crocodilians worldwide. It is estimated that a minimum of 100,000 alligators occur in the state of South Carolina.

The 2010 Public Alligator Hunting Season marked the third general alligator hunting season after a closure of nearly 40 years. However, alligators have been legally hunted in South Carolina since 1995 under the Private Lands Alligator Harvest Program. The Private Lands Program was established as a means for large landowners having significant amounts of alligator habitat to manage their alligator numbers on a sustained-yield basis, and included quotas for specific size-class alligators. This year’s public hunt, utilizing a random computer drawing, was open to all applicants, including nonresidents, and was conducted on public and private lands (not enrolled in the Private Lands Program) from the Midlands to the coast.

Because alligators can grow to considerable size, alligator hunters can have others assist them with the taking of an alligator during the season. Everyone who participates must have a South Carolina hunting license, or be under the age of 16. To participate in the public alligator season one must apply, be selected, then pay a fee for a permit and harvest tag. The fee for the permit and tag is \$100. In addition, any nonresident hunter or nonresident assistant 16 years of age or older must pay a \$200 nonresident alligator hunting fee. By law, all fees collected for the alligator hunting program are used to support administration of the alligator program in South Carolina and for research, monitoring, and management of this important resource.

HUNTER SELECTION

The public alligator hunt is a limited-drawing hunt in which participants are selected in a randomized computer drawing. All potential hunters are required to submit an application online to the Department of Natural Resources (DNR) website (www.dnr.sc.gov) and pay a non-refundable application fee of \$10.

Of the 1,000 permits available for the 2009 season, 848 permits were purchased. Therefore the Department’s Administration recommended that 1,200 permits and tags be allocated for the 2010 hunt in an effort to distribute 1,000 permits and tags. The four hunt units (Figure 1) remained unchanged. With the exception of a small portion of Berkeley County located within Lake Marion, county lines bound all hunt units. The allocation of permits per hunt unit increased from 250 to 300 per unit based on the 1,200 tags available. Hunters could select the option to be considered for any or all of the units for the computer drawing, but if successful, are only selected to hunt in one unit. After paying the \$100 tag fee, those selected for the hunt, were issued a permit and one harvest tag. All alligator harvest tags and permits are issued to the selected hunter and are non-transferrable. The harvest tag is a numbered, permanently locking

nylon tag that must be attached to the alligator's tail immediately after harvest. The permit and tag allowed a hunter to take one alligator greater than 4 foot in total length from either public or private waters in their selected hunt unit; however, no alligator hunting was allowed on public lands such as Wildlife Management Areas (except in navigable waters normally open to the general public for hunting), State Parks or Federal properties like National Wildlife Refuges and their jurisdictional waters.

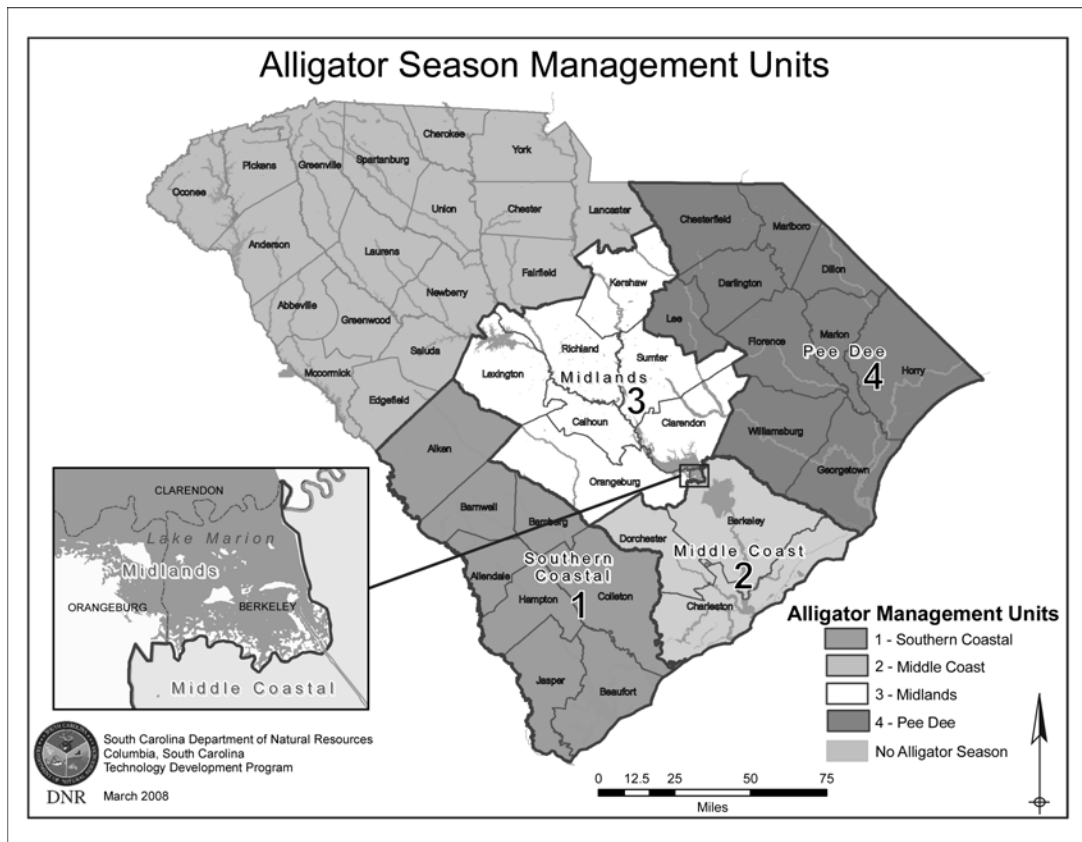


Figure 1. 2010 Alligator Management Units.

Legislation passed during the 2010 legislative session requires that all nonresident alligator hunters pay a *nonresident alligator hunting fee*. This fee is *in addition* to any application, licensing, and permit fees normally required to hunt alligators. The cost is \$200 and is required of all nonresident hunters, as well as all nonresident assistants that are 16 years of age or older. Thus, the *minimum* cost for a nonresident alligator hunter that receives a permit and tag in the hunt selection is \$350. The fee breakdown would be: \$10 for the application, \$100 for the permit/tag, \$200 for the nonresident alligator hunting fee, and \$40 for a 3-day nonresident hunting license. Nonresident assistants 16 years of age or older would pay a minimum of \$240. This would include the \$200 nonresident fee and a 3-day hunting license. Nonresident assistants under 16 do not pay any fees. Other states have similar additional nonresident fees or prohibit participation altogether.

The online application process began on May 1st and ended on June 15th. A total of 3,784 hunters applied for the 2010 hunt, an increase of 1.8% from the previous season. This number included applicants from 35 different states (including SC) and one from Puerto Rico. Similar to last year, resident applicants comprised 85.9% of the total applications received.

While there was a potential pool of approximately 2,700 hunters from the 2009 season that were not selected last year and received a preference point for the 2010 season, less than half applied this season. In fact, because of the allocation of 1,200 permits this year, over 80 applicants *without a preference point* were selected. However, due to the popularity of the Midlands and Middle Coastal hunt units, only hunters with preference were drawn for those areas. As with previous years, any applicant with a preference point that does not apply in a subsequent year will lose any accumulated preference points. Also, applicants lose any accumulated preference points once selected for a permit whether the permit is purchased or not.

A total of 1,047 of the 1,212* hunters selected (86.4%) for the 2010 season completed the application process and were issued a harvest tag and permit. The tag purchase rate of 86.3% was slightly higher than the rate in 2009 (82.9%). The purchasing rate still remains above the rate of 70-80% that staff had predicted when initially allocating the 1,000 permits at the time the public alligator program was developed.

Four alligator hunting seminars were held prior to the season to assist hunters and potential hunters in understanding the laws, regulations and the techniques used for this season. Overall, approximately 300 people attended the seminars, which were held in Georgetown, Moncks Corner, Columbia, and Spartanburg. The seminars also provided the opportunity to explain the new nonresident hunting fee. Once again, alligator hunting vendors and guides were allowed to attend the seminars to showcase the tools and devices commonly used in alligator hunting. The 2010 Alligator Hunting Guide, which is available on the DNR website (<http://www.dnr.sc.gov/wildlife/alligator/pdf/2010gatorguide.pdf>), was updated to reflect changes from the previous season and to clearly explain the new nonresident fees. All permitted alligator hunters received a copy of the hunting guide when they purchased their permit and tag.

This year's season began at noon on September 11th and ended at noon on October 9th. One change from the 2009 season was that all hunters with hunting equipment on board a boat were required to remain in the immediate vicinity of the boat ramp until the season actually began.

*12 additional applicants were selected due to database correction measures.

SEASON RESULTS

All permitted alligator hunters were required to report their hunting activities by December 1st, regardless of whether or not they actually went alligator hunting in South Carolina. Reporting compliance for 2010 was 73.0% for all fully permitted hunters (764 reports), down from 80.0% last year. Those hunters that did not report are not allowed to apply for the next hunting season.

The total number of alligators reported taken during the 2010 public alligator hunting season was 473, an increase of 4.6% from the 2009 season. This represents a success rate of 45.2% for all fully permitted hunters (n=1046), and 39.0% for all selected applicants (n=1,212). The Southern

Coastal unit had the most alligators taken at 141 (29.8% of total harvest), followed by the Middle Coastal with 117, Pee Dee with 111 and the Midlands unit at 104 (Table 1).

Table 1. The number of alligators taken and percent of total alligators harvested for the 2010 season by Hunt Unit.

Hunt Unit	Number of Alligators Taken	Percent of Total Harvest
Middle Coastal	117	24.7%
Midlands	104	22.0%
Pee Dee	111	23.5%
Southern Coastal	141	29.8%
Total	473	100.0%

Fully permitted hunters who actually reported going hunting (n=740) had a success rate of 63.6%. The number of hunters that hunted, but were unsuccessful was 269 (25.7%). Another 2.3 percent of hunters (n=24) that paid their \$100 tag fee reportedly did not go alligator hunting this season.

The *reported* participation rate was highest in the Southern Coastal unit at 61.0% of all the selected hunters (n=300) for the unit going on at least one alligator hunting trip. Participation rates for the other units were as follows: Midlands at 51.3% (n=308), Middle Coastal at 50.8% (n=303), and the Pee Dee unit at 46.2% (n=301; Figure 2). Of *all hunters* that went on at least one hunting trip, the most efficient hunters were in the Southern Coastal unit. Hunters in this unit only went on 417 trips with 141 alligators taken, averaging one alligator killed per 3.0 (SD=1.65) hunting trips. The Pee Dee unit had 350 outings, and the success rate was 1 alligator per 3.2 (SD=1.4) trips. Middle Coastal hunters went on 457 alligator hunting trips, took 117 alligators, averaging an alligator per 3.9 times (SD=2.0) afield. Lastly, hunting trips for Midlands hunters numbered 523, or 1 alligator per 5.0 trips (SD=2.4). Statewide, one alligator was killed for every 3.7 alligator hunting trips taken (SD=2.2).

Considering only *successful hunters*, the most efficient hunters were again from the Southern Coastal unit at one alligator for every 2.0 hunting trips (SD=1.6). Pee Dee hunters took one alligator for every 2.3 outings (SD=1.8), followed by hunters in the Middle Coastal unit at 2.4 days per alligator taken (SD=1.8). Lastly, successful Midlands hunters averaged one alligator for every 2.9 days afield (SD=2.3). Collectively, successful hunters averaged one alligator for every 2.4 days spent hunting (SD=2.0).

The average size of all alligators reported taken during the 2010 public season was 9'3" (SD=2.0). The average size alligator taken in the Middle Coastal was 9.8 feet followed by the Midlands (9.7 feet), Pee Dee (9.0 feet), and the Southern Coastal at 8.7 feet (Figure 3). A total of 9 alligators were reported at 13 feet or greater (1.9% of total). This was the same as in the 2009 season. According to harvest reports, two alligators taken this year match last season's largest animal at 13'8". The smallest alligator reported was 4'5".

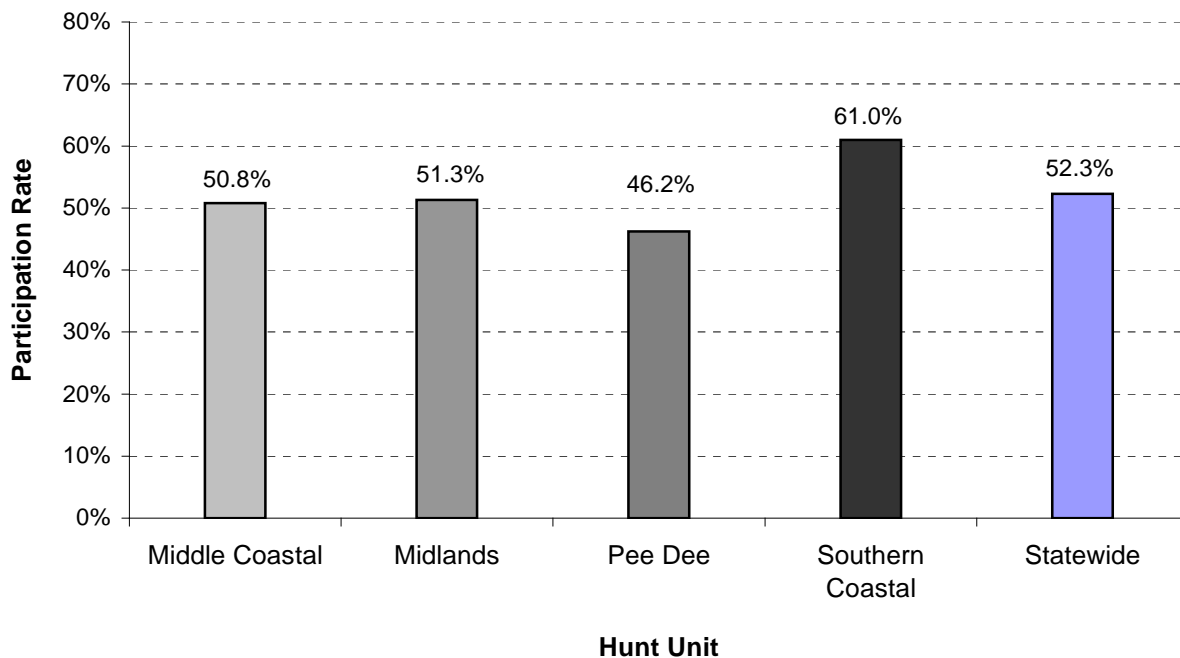


Figure 2. Reported participation rate (at least one trip afield) for all hunters selected to participate in the 2010 alligator season by Hunt Unit.

With respect to individual size classes, the majority of alligators taken were in the 8-foot size class (19.0%). In addition, 35.2% (down from 39.6%) of the total alligators taken were 10' or greater in length (Figure 4). While there were the same number of 13-foot class alligators taken as last season, there was a 9.2% decrease in the numbers of alligators greater than 8 feet.

Twenty-five (5.3%) alligators taken were reported to be less than 6' in length. The number of smaller alligators (six foot and smaller) increased from forty-eight in 2009 to seventy-two this season. As was the case last year, the majority (60.2%) of the larger alligators, those over 10 feet, came from the Midlands and Middle Coastal units (Table 2; also see Appendices). Of the very large alligators, the Midlands and the Middle Coastal units had forty of the forty-seven (85.1%) alligators taken that were in the 12 or 13 foot-class. To further contrast the size class differences, only five alligators in the 12-foot size class were taken from the Pee Dee unit and two in the Southern Coastal unit. No thirteen foot alligators were taken from the Pee Dee or Southern Coastal units.

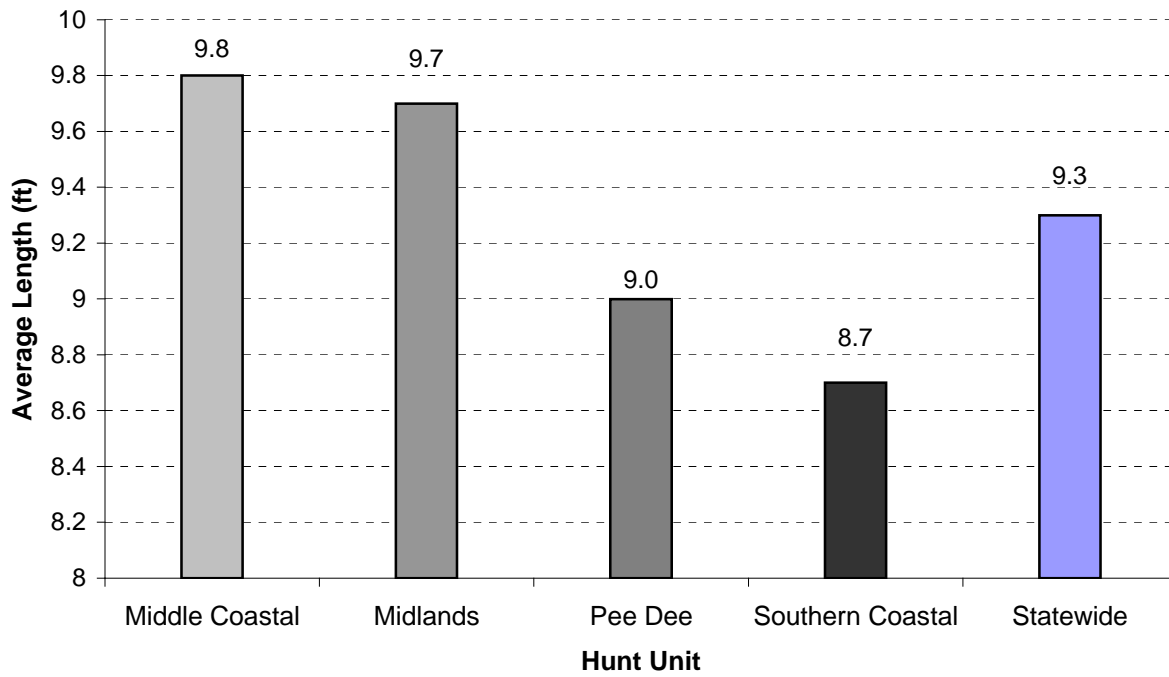


Figure 3. Average size of alligators taken during the 2010 Public Hunting Season by Hunt Unit.

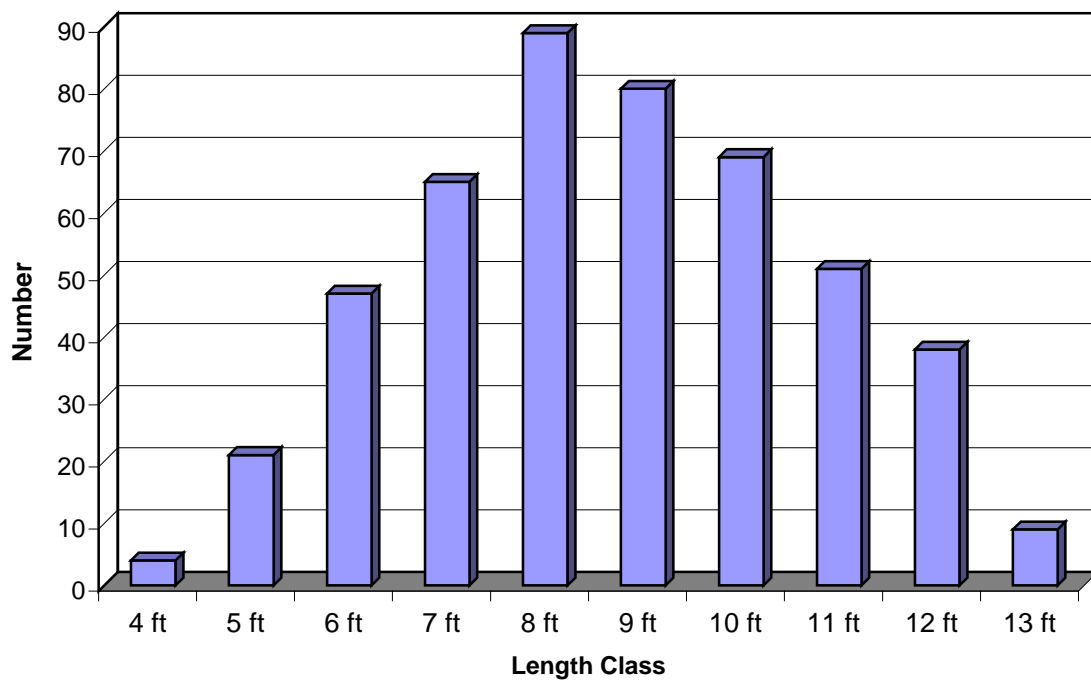


Figure 4. Number of alligators taken by size class during the 2010 Public Hunting Season.

Table 2. Number of alligators taken by size class and Hunt Unit during the 2010 Public Hunting Season.

Hunt Unit	Alligator Size Class ^a									
	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
Middle Coastal	2	1	6	14	20	22	20	15	14	3
Midlands	0	11	8	11	11	15	10	15	17	6
Pee Dee	0	3	14	21	24	20	18	6	5	0
Southern Coastal	2	6	19	19	34	23	21	15	2	0
Totals	4	21	47	65	89	80	69	51	38	9
Change from 2009	+2	+11	+11	-9	+13	-9	-2	-5	-7	---

^a Shaded area denotes "larger" alligator size classes

Alligator harvest was reported from twenty coastal plain counties, the same as last season. Reported take by county revealed that three counties: Berkeley, Georgetown, and Colleton, comprised nearly 60% of the public alligator harvest (Table 3; Appendix V). Those same counties accounted for approximately 70% of the harvest last season. The largest alligators, on average, came from three Midlands Unit counties: Clarendon, Calhoun, and Berkeley. While Florence County had the largest average alligator size, that figure is represented by only three alligators that were taken in that county this season (Figure 5).

Reported meat yield from all harvested alligators was 14,170 lbs, a 20.2% decrease from 2009.

The most commonly reported alligator capture technique was a hook and line, with nearly half (45.4%) of all successful hunters using this as their primary capture device. Twenty-four percent of hunters used a bow, followed by a crossbow (17.8%), harpoon (10.6%) and the remainder of the hunters described using other devices (Figure 6). Nearly 24% of hunters reported utilizing more than one device to harvest an alligator. Most used a combination of a hook and line followed by other devices, with a harpoon as the most commonly reported secondary item, generally to attach a second line to the animal to maintain control. A total of 16.8% of successful hunters utilized a guide's services, up from 8.9% from last season and 6.4% in the first season.

Alligator hide utilization (either sold, kept, or given away) was reported at 76.0%. Of this amount, only two skins were denoted as sold, likely a result of the continued poor market for alligator hides.

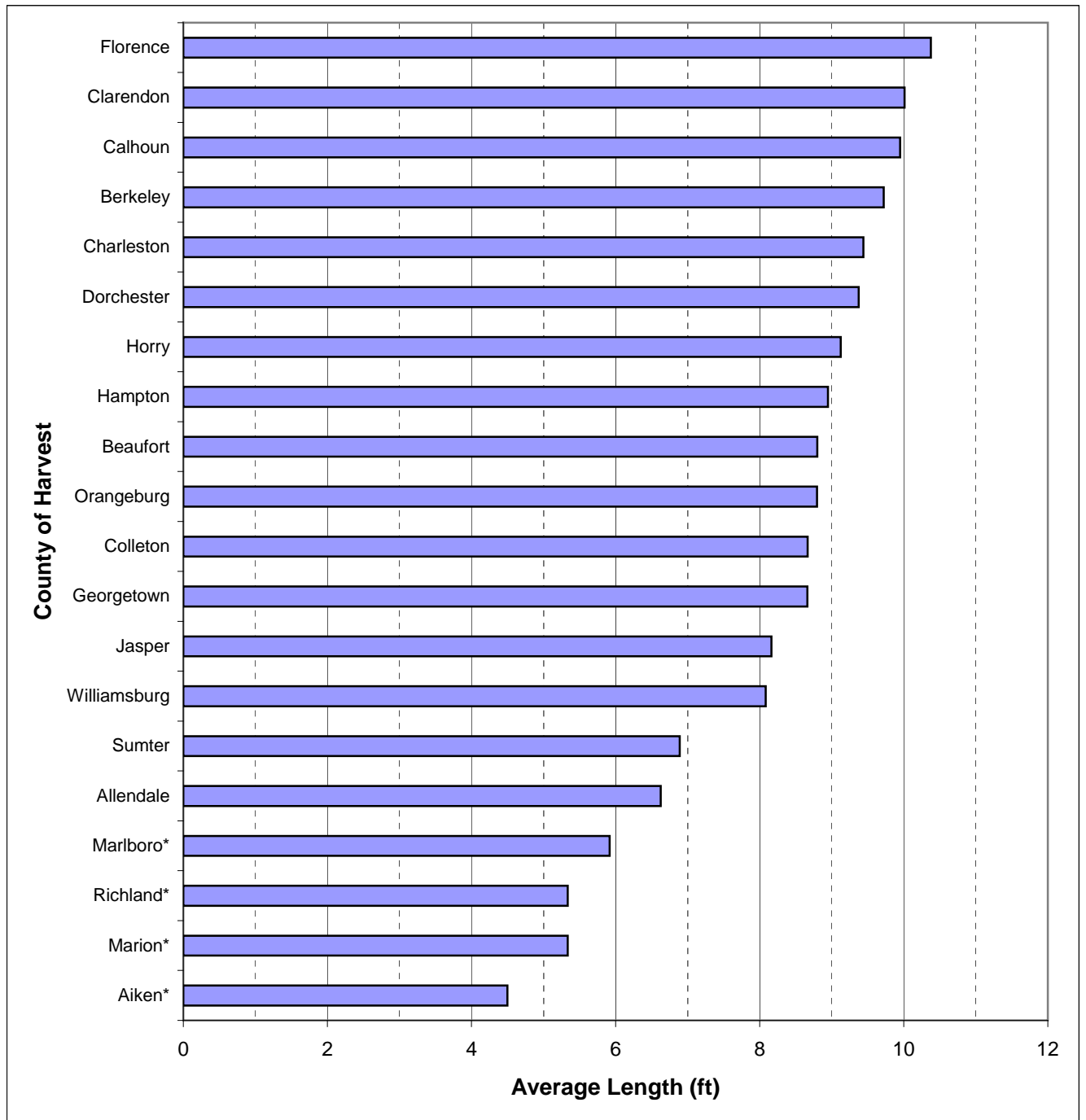
Table 3. 2010 Alligator harvest and percent of total alligator harvest by hunt unit and county.

Hunt Unit	County	Number of Alligators Taken	Percent of Total Harvest*
MIDDLE COASTAL		117	24.7%
	Berkeley ^a	91	19.2%
	Charleston	22	4.7%
	Dorchester	4	0.8%
MIDLANDS		104	22.0%
	Clarendon	46	9.7%
	Orangeburg	26	5.5%
	Calhoun	21	4.4%
	Berkeley ^b	7	1.5%
	Sumter	3	0.6%
	Richland	1	0.2%
SOUTHERN COASTAL		141	29.8%
	Colleton	81	17.1%
	Beaufort	38	8.0%
	Jasper	10	2.1%
	Hampton	9	1.9%
	Allendale	2	0.4%
	Aiken	1	0.2%
PEE DEE		111	23.5%
	Georgetown	100	21.1%
	Horry	3	0.6%
	Williamsburg	3	0.6%
	Florence	3	0.6%
	Marion	1	0.2%
	Marlboro	1	0.2%
TOTAL		473	100%

^a Includes the portion of Berkeley County in the lower end of Lake Marion.

^b Does not include the portion of Berkeley County in the lower end of Lake Marion.

*Percentages may not be equal due to rounding of decimal numbers.



*Represented by only one alligator.

Figure 5. Average length of alligators reported taken during the 2010 Public Harvest Season by county.

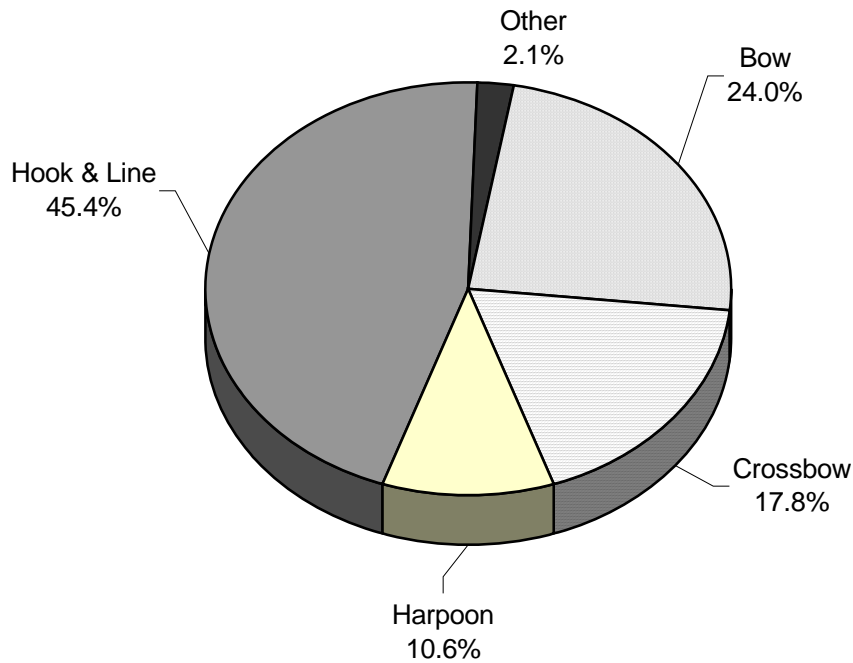


Figure 6. Reported initial capture device utilized during the 2010 Alligator Season.

DISCUSSION AND RECOMMENDATIONS

The number of applicants for this season's alligator hunt was approximately the same as last year. It was unknown how the new nonresident alligator hunting fee would affect the application rate long-term, but so far it doesn't appear that this new fee is a hindrance to out of state applicants. Because the nonresident fee legislation was still pending during the application period, the Alligator Program attempted to make the potential change in legislation as visible as possible. Bold warnings and information boxes were posted on the alligator hunting information portion of the DNR website to allow nonresident applicants to follow the legislation from the SC Legislature's website (www.scstatehouse.gov). Any documentation was clear to spell out that nonresidents might have to pay an additional fee on top of the normal licensing costs. As soon as the legislation passed, all website materials as well as the printed 2010 Alligator Hunting Guide denoted this change. It is unknown what effects this additional fee will have on the continued application rate for nonresident applicants, but from an overall cost perspective, South

Carolina's nonresident hunter fees are in line with other states, most notably Georgia's, the state from which our program was modeled.

As expected, the number of problems with the online application system dropped from the previous year. For 2010, twelve additional applicants were added to the 1,200 permits allocated for the hunt in order to correct database problems from both this year, as well as previous seasons. Most database problems involved the third-party credit card processing vendor. In these cases, applicants were charged their application fee, but never actually entered into the alligator hunt drawing database. Since the applicant correctly followed the application procedures and paid their fee, they assumed they were entered into the drawing. As a correction, those applicants were allotted a permit for this season just as though they were successfully chosen. In a couple of instances there were applicants with preference points that should have been selected, but were not. Further investigations revealed that in a couple of cases, the applicant had two different Customer IDs in the DNR's database, treating the person as two separate individuals instead of one. The total number of database applicants requiring corrective measures amounted to 0.3% of all applications received.

For the 2011 season, no significant change in the tag allotment or application process is expected.

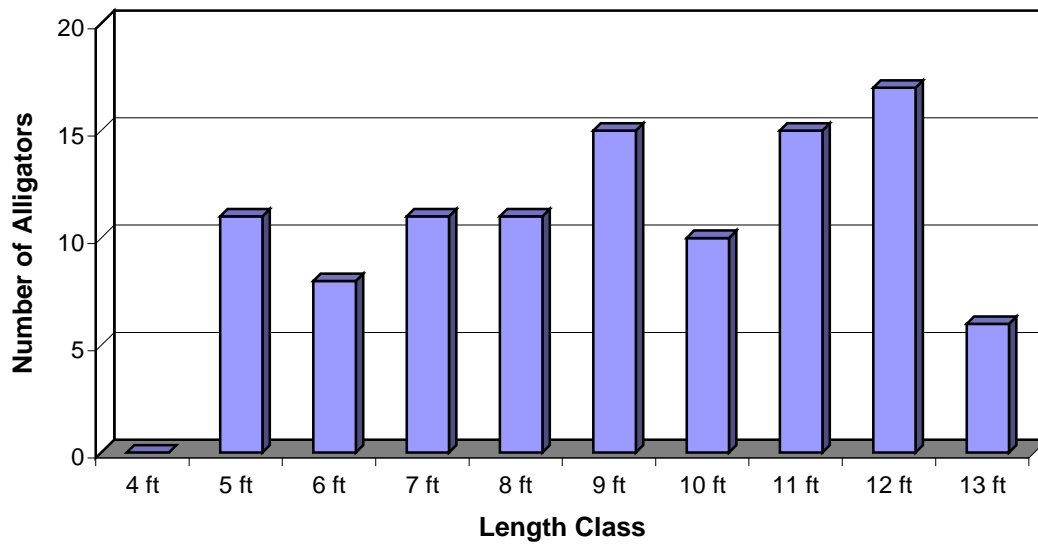
In an effort to forgo secondary drawings, additional applicants were selected for the 2010 alligator hunt. The addition of 200 potential permittees - based on purchase rates from previous seasons - had the desired effect of nearly issuing all of the 1,000 permits that were allocated for the first two seasons. From an administrative standpoint, overdrawing, as opposed to additional drawings, is certainly less of a burden on already strained administrative staff. It is expected that a secondary drawing will not take place in 2011 and the available permits will remain at 1,200.

The success rates of our state's alligator hunters is still above our initial estimates of approximately 30% or so based on those rates from Georgia. While success rates remain high, we are starting to see increased effort in order to harvest an alligator. In general, while the overall sizes have not decreased substantially, the number of days to get an alligator has increased from 2.4 to 3.7, an increase of 54.2%.

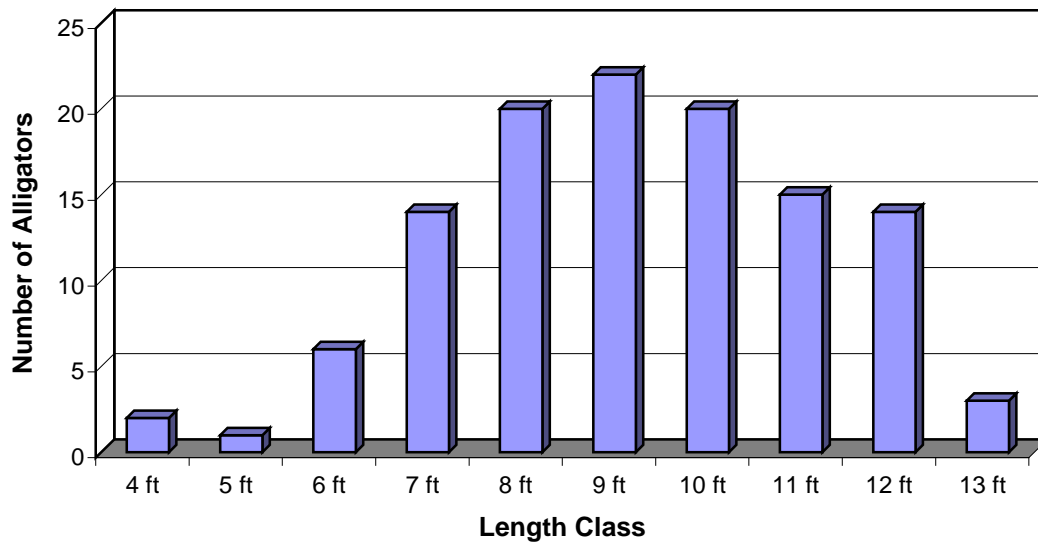
Surprisingly, the harvest of exceptionally large alligators continued this season as the same number of 13-foot class alligators were taken this season as in 2009. However, the number of alligators in the nine to twelve-foot class decreased by nearly 10% from the previous season. Because of slow growth rates, large alligators are not an infinite resource, and South Carolina is presently harvesting some of the largest alligators throughout its range. There is speculation that with increased interest in the public alligator hunting season comes a certain respect for the resource as a hunted species. It is also quite possible that the chance to harvest a very large alligator may be driving the number of applications the Department receives; therefore, attention needs to be given to the harvest as it relates to the number of very large alligators taken. There could come a time where interest in the alligator season drops off considerably if we reach the point where 12-foot plus alligators are no longer available for harvest.

Appendix

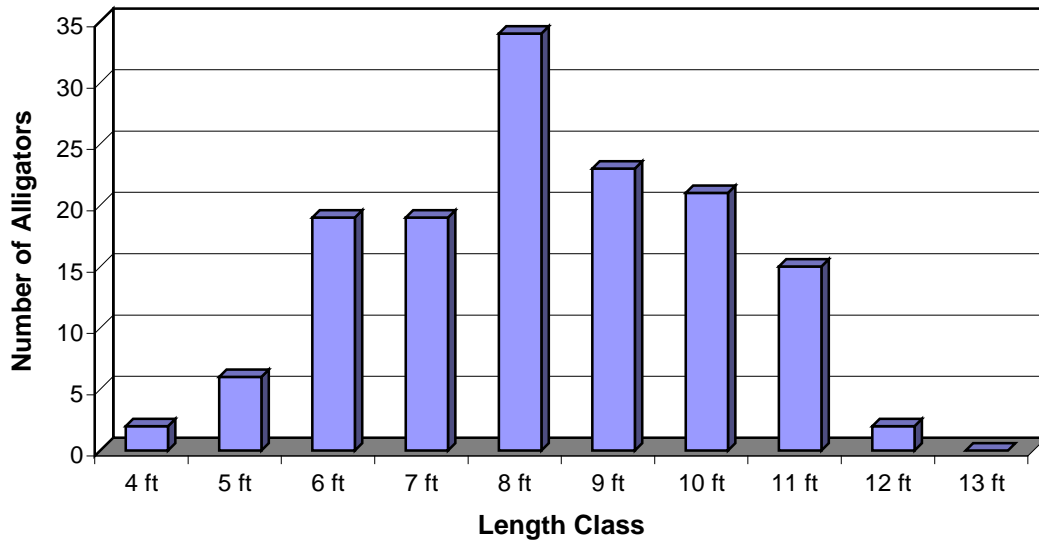
2010 Harvest Graphs
by
Public Alligator Harvest Hunt Unit
and
Harvest by County



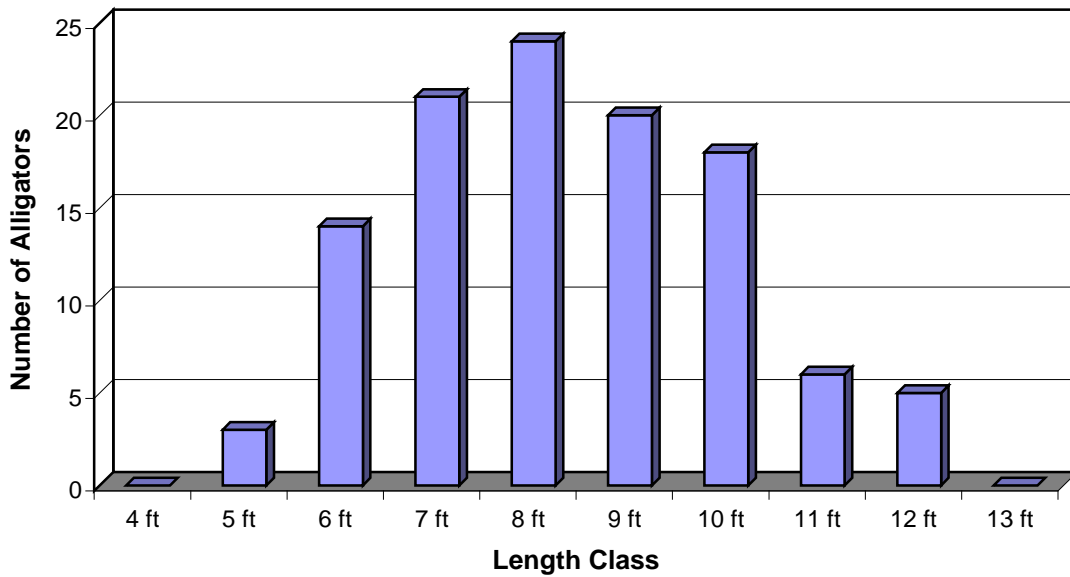
Appendix I. Number of alligators taken during the 2010 Public Hunting Season by size class for the Midlands Hunt Unit.



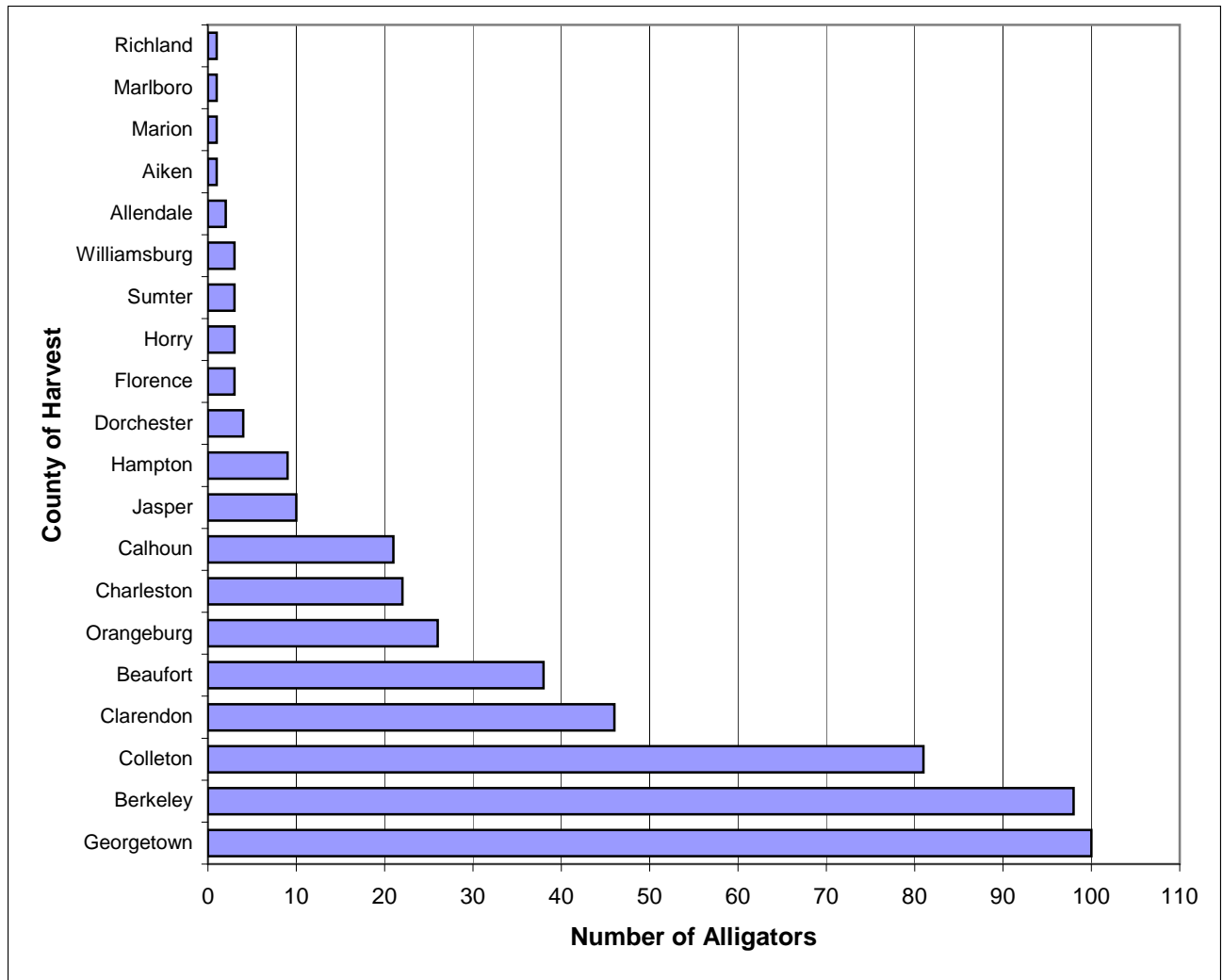
Appendix II. Number of alligators taken during the 2010 Public Hunting Season by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2010 Public Hunting Season by size class for the Southern Coastal Hunt Unit.



Appendix IV. Number of alligators taken during the 2010 Public Hunting Season by size class for the Pee Dee Hunt Unit.



Appendix V. Number of alligators taken during the 2010 Public Hunting Season by county of reported harvest.

Appendix VI. Number of alligators taken during all years of the Public Hunting Season, by Hunt Unit.

Hunt Unit	Year			Total
	2008	2009	2010	
Middle Coastal	121	147	117	385
Midlands	87	93	104	284
Pee Dee	60	104	111	275
Southern Coastal	94	108	141	343
Annual Total	362	452	473	1,287